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of the American Psychological Association

1967 Revision

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המכון ההוניברסיטאי
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FOREWORD

Since its first appearance in 1952, the *Publication Manual* has proved of considerable value to contributors to, and editors of, the journals of the American Psychological Association. Exhaustion of the stock of the 1952 edition resulted in a 1957 revision, a joint product of the Council of Editors and Laurance F. Shaffer. At the 1964 meeting of the Publications Board, the Publications Office was charged with the production of such a revision, and, under the direction of Estelle Mallinoff, the Editor of Special Publications, a rough draft was assembled. Copies of the typescript were sent to all members of the Council of Editors and to the Publications Board for comments and suggestions. The result of this collaboration is the 1967 edition.

The basic format and substantial parts of the original material have been retained. The current revision reflects changes since 1957 in the style and technical details of the journals. Those persons who have collaborated in this 1967 revision hope that it will be as helpful to authors and editors as were its predecessors.

1967 REVISION

One of the major functions of the American Psychological Association is the publication of scientific and professional journals. Its 14 journals embody the results of a vast amount of scientific, literary, and editorial effort, and also represent a substantial business enterprise. With the rapid growth of psychology, the number of manuscripts submitted to each journal increases year by year, and thus there is an increasing need to conserve time and effort in the expanding undertaking of psychological writing and publishing.

The purpose of the *Publication Manual* is to improve the quality of psychological literature. The ultimate beneficiary is the reader of psychological journals whose time and energy are spared when articles are clear and concise. Most directly, the *Manual* serves the authors of articles. By following its instructions many authors will be saved the labor of revising and retyping manuscripts acceptable in content but not in form, and editors should benefit by being relieved of the necessity of reading and returning many manuscripts which deviate from acceptable standards of style.

Although there are a few minor deviations in style among APA's journals, an overall uniformity prevails — an advantage to authors who write for several journals. The Council of Editors especially recommends that the *Manual* be widely used as a guide for graduate students in the preparation of papers.

Authors are advised to study the content of the journals before submitting articles to editors. It is important for an author to read the journal for an understanding of the area of psychology covered, and to determine the approximate average length of accepted and published articles. *It is also advisable to read the information which most journals publish on the inside front cover.* Time is wasted when an article is sent to an inappropriate journal, or when the length of the manuscript exceeds the limit of tolerance of the journal to which it is submitted. Occasionally articles may be appropriate to two or more journals, but in virtually all cases the author can select the journal most suitable for his contribution. Finally, authors must realize that editors no longer can do preliminary editing for authors; the increased number of submissions places too great a burden on an individual editor to allow for detailed reworking or correction of material.

The Journals of the American Psychological Association

The Association's 14 journals were acquired between 1925 and 1968 by gift, purchase, direct initiation, or fission. As they have been acquired and established, the Association has adapted its pattern of publications to fit the needs defined by the growth of psychology as a science and a profession. The present status of the evolutionary process is indicated by the following brief descriptions of the fields of the journals.

The *American Psychologist* (monthly) is the Association's professional journal. A large part of its annual contents consists of the official papers of the APA: the program of the annual meeting, reports and proceedings of the Council of Representatives, reports of boards and committees, and news notes. It also publishes from 200 to 300 pages of submitted articles. Appropriate topics for such submissions include the practice of psychology as a profession; methods and resources for graduate and professional education; the work, status, and earnings of psychologists; the relation of psychology to other professions; novel applications of psychology; and scientific articles of interest to psychologists in many fields. Preference is given to articles of broad interest which cut across the subdivisions of psychology. The Comment section publishes correspondence on controversies of current interest. Titles of other sections — Psychology in Action, Psychology in the News, and State and Professional Affairs — are self-explanatory.

Contemporary Psychology (monthly) is APA's journal of book reviews. Evaluative criticism is favored, and reviews are long enough to permit this sort of discussion. While all reviews are written on invitation, suggestions as to important books and appropriate reviewers are welcomed. The most important books, especially when they deal with controversial topics, may have more than one review printed simultaneously. In the section called Instructional Media, educational and research films, educational television presentations (in psychology), and materials involved in programmed instruction are described and assessed. A page of editorial comment discusses news about books and other matters which concern both the writing of books and the functioning of the journal. Brief letters from readers and authors about the published reviews are welcomed insofar as space permits their publication.

Because *Contemporary Psychology* prints only reviews, many of the rules cited in this *Manual* do not apply. The editor supplies certain instructions with respect to literary style and form to each person who is invited to write a review.

Developmental Psychology (bimonthly) publishes regular articles, short articles, and monographs and will consider brief one-page reports. "Development" is considered to be a process extending throughout the life cycle of both humans and animals. Relevant developmental variables include sex, social status, and well-defined criteria in the field of growth and maturation, as well as age. Research and theoretical articles concerning methods of study in rapidly developing areas such as assessment of infancy and early childhood, the psychosocially disadvantaged, and the relatively neglected areas of adolescence and aging are welcomed.

The *Journal of Abnormal Psychology* (bimonthly) carries theoretical and research contributions in behavior pathology. It is devoted to basic research and theory in the broad field of abnormal behavior. Case histories, studies of therapy and behavior change, analyses and experimental studies of abnormal behavior and motivation, theories of personality or emotional abnormality, to cite a few illustrations, all would fall within the field of interest of this journal.

The *Journal of Applied Psychology* (bimonthly) carries manuscripts reporting original investigations in any field of applied psychology except clinical psychology, personal counseling or psychotherapy, or educational psychology. A descriptive or theoretical article is occasionally accepted if it deals in a distinctive manner with a problem of applied psychology. Most papers deal with quantitative investigations of direct value to psychologists working in the following fields: personnel selection, training, placement, transfer, and promotion in business, industry, and government service, including the armed forces; vocational diagnosis and occupational guidance; use of psychological measurements in educational diagnosis, prediction, and guidance at the secondary school level and higher; supervisory training in business, industry, and government; biomechanics or design of machines to fit the human operator; factors in the work environment which influence productivity or job satisfaction; job analysis, description, and classification and evaluation; measurement of morale of executives, supervisors, or employees; and psychological problems in survey research and in advertising.

The *Journal of Comparative and Physiological Psychology* (monthly, two volumes annually) contains original experimental contributions to physiological, comparative, and sensory psychology. Psychopharmacological studies are considered appropriate when they elucidate behavioral processes or the underlying neurological and biochemical mechanisms, but not when they are limited to assaying effects of drugs on performance. Although the majority of research that is published in the journal involves animal

subjects, work of a comparative character utilizing human infants, young children, or the mentally retarded is encouraged; studies involving normal adult human subjects are considered appropriate only when the methods and theoretical orientation are clearly psychophysiological in character.

The *Journal of Consulting and Clinical Psychology* (bimonthly) is the clinical journal of the American Psychological Association. It is devoted primarily to the publication of original research relevant to psychological diagnosis, psychotherapy and counseling, personality, and the dynamics of behavior. Case studies, theoretical contributions, descriptions of clinical techniques, and discussions of the professional problems of clinical psychology also appear in its pages. There is a Notes and Comments section and a Brief Reports section. Brief reports are one-page condensations of minor or specialized studies of which the author makes a full report available in mimeographed form and deposits it with the NAPS (see Section 6.2).

The *Journal of Counseling Psychology* (bimonthly) serves as a primary publication medium for research on counseling theory and practice. Research and theoretical discussions on related topics are also welcomed, as, for example, other student personnel procedure, vocational development, counseling diagnosis, prediction of academic success, and measurement studies directly related to counseling. Topical reviews of research and other systematic surveys on these topics may be included periodically. The journal is designed to be of interest to psychologists and counselors in schools, colleges, universities, hospitals, business, and military agencies.

The *Journal of Educational Psychology* (bimonthly) publishes original investigations and theoretical papers dealing with problems of learning and teaching, and the psychological development, relationships, and adjustment of the individual. Preference is given to studies of the more complex types of behavior, especially in or relating to educational settings. Articles concern all levels of education and all age groups.

The *Journal of Experimental Psychology* (monthly, three volumes annually) publishes articles intended to contribute toward the development of psychology as an experimental science. Experimental work with normal human subjects is favored over work with abnormal or animal subjects. Studies in applied experimental psychology or engineering psychology may be accepted if they have broad implications for experimental psychology or for behavior theory.

The *Journal of Personality and Social Psychology* (monthly, three volumes annually) is concerned with basic studies and theoretical articles of man (and animal) as a social creature as he both affects social processes

and is affected by them. Thus articles are accepted in such subareas as the structure of personality; psychodynamic processes in normal populations; social motivation; the socialization process both at the childhood and adult levels; attitudes; social interaction, communication, and influences; and psychological aspects of social structure.

Although studies on the structure of personality are accepted, the areas of personality assessment and the development of instruments are seldom considered. No attempt is made to cover studies of abnormal processes or populations, that is, the nature of the deficit among mental defectives or the nature of mental disorder, or the social or psychological basis of therapies.

Psychological Abstracts (monthly) contains nonevaluative abstracts of the world's literature in psychology and related subjects. Unlike other APA journals, it contains no original articles; contributions of abstracts of relevant material published in journals not ordinarily covered by *Psychological Abstracts* are encouraged. Competent abstractors are often needed, especially to cover foreign-language journals. Abstractors are appointed by arrangement with the Executive Editor.

The *Psychological Bulletin* (monthly) contains critical reviews of the literature in all fields of psychology, articles on statistical methodology, and discussions of controversial issues. Reports of original research or original theoretical articles are not accepted, unless used to illustrate a method.

As of 1967, *Psychological Monographs* is no longer a separate publication. Instead, *Monograph* manuscripts appear as Monograph Supplements to several of the substantive journals. Manuscripts should be sent to the editor of the appropriate journal. (Consult its inside front cover for the specific policy of the journal.) Preference is given to reports of comprehensive experimental investigations which do not lend themselves to adequate presentation in the regular pages of a journal. There is no fixed limit to the number of pages permitted in any monograph. An important programmatic study, for example, will usually require more pages than a less extensive research. Authors of monographs should consult the article by Kimble (1964), and also note the special comment in Section 6 of this *Manual.*

The *Psychological Review* (bimonthly) is devoted to articles in general and theoretical psychology. This area is obviously difficult to define, but preference is given to manuscripts which contribute broadly to fundamental concepts and theory. Papers that present surveys of the literature, report experiments, or deal with problems of method and design, or with applications are not ordinarily appropriate. The *Psychological Review* does not publish book reviews.

Publication Policies

Policies and practices have been established for the operation of APA journals, either by formal actions of APA's governing bodies or through informal consensus and established custom. The procedures by which the Association controls its publication enterprises are stated in its Bylaws, mainly in Article XVI, and also in parts of Articles III, VI, VII, X, and XVIII. Interested readers and authors should consult the Bylaws for information concerning the formal aspects of the management and operation of the journals.

Liability and copying rights. Authors are solely responsible for the factual accuracy of their contributions. The Association and the editors of its journals assume no responsibility for the statements and opinions advanced by the contributors to these publications. In addition, the author is responsible for obtaining permission to quote excerpts from any previously published material.

Articles accepted for publication in one of the Association's journals may not be reprinted elsewhere without written permission from the Association and the author. The author alone cannot grant permission; authors who desire to reproduce or publish their articles elsewhere also must obtain written permission from the Association. All requests for permission to reprint or quote material should be addressed to the Managing Editor at the APA Central Office.

Editorial responsibilities. The editor of each journal is responsible for its entire conduct, within broad policies decided by the governing bodies of the Association and rules of procedure adopted by the Council of Editors.

In addition to the office of Editor and Managing Editor, the posts of Executive Editor, Associate Editor, and Consulting Editor exist in one or more APA journals. These positions are defined as follows:

The *Managing Editor* and the staff of Technical Editors of the Publications Department of the APA are responsible for the technical editing and production of the journals.

The *Executive Editor* and the staff of *Psychological Abstracts* are responsible for the preparation of that journal.

An *Associate Editor,* under the general guidance of an editor as to policies and procedures, is assigned a major and direct responsibility for the management of a defined segment of a journal. The segment may be a portion of a year, a topical area or department within the field of the journal, or a share of the manuscripts received. An Associate Editor, when requested by the editor, may correspond directly with authors concerning the acceptance, revision, or rejection of contributions.

A *Consulting Editor* advises, upon the editor's request, on matters of the journal's policy and on acceptance, revision, or rejection of specific contributions referred to him for appraisal. He does not correspond directly with authors, but may draft statements for the editor to use in such correspondence.

Submission of manuscripts. Any person may submit a manuscript to an APA journal. The author does not have to be an APA member or sponsored by a member. Ordinarily, manuscripts are submitted voluntarily on the author's initiative, although editors may invite an author to submit an article. In no instance does an author receive remuneration. Manuscripts should be sent to the editor of the appropriate journal at his editorial office, not to the APA Central Office in Washington. The name and address of the current editor may be found in the most recent issue of the journal. *Manuscripts must be submitted in duplicate.*

Selection of manuscripts. A manuscript is judged by three main criteria: (*a*) It must make a significant contribution to an area of psychology appropriate to the journal to which it is submitted; (*b*) it must convey its message clearly and as briefly as its content permits; and (*c*) it must be in a form that will maintain the journal's integrity of style and communicate to the printer exactly what he is to set in type. Manuscripts which do no fulfill the first criterion are rejected. Those which do not fully meet the second and third requirements are usually returned for revision.

Procedures in editorial review. Upon receiving a manuscript, the editor writes a letter of acknowledgment to the author, and either sends the manuscript to one of his consulting editors or reviews it himself. The manuscript is evaluated for its appropriateness and quality as well as for other criteria. In some cases the consulting editor may suggest further review. The editor, acting on his own decision or on the recommendation of his consulting editor(s), then informs the author of action taken on the manuscript, which may be: outright rejection; rejection in its present form; an indication of acceptance if it can be revised in accordance with specific suggestions; or acceptance in its original form. The normal period for such a review varies, depending on the number of manuscripts being reviewed at the time and on the nature of the manuscript. Ordinarily an author will hear the editor's decision within an 8-week period.

Articles in series. APA editors discourage the publication of a series of articles based on a single research study for two reasons: (*a*) The reader's task is made more difficult than if a single, unitary article were published; and (*b*) space is wasted because of the duplication of introductory matter, description of procedure, etc. Serial publication may be sometimes justified,

but only if each separate article deals with a study which stands logically and psychologically as an autonomous unit. Authors having articles prepared as a series should submit them at the same time to the same editor, who can then decide whether to accept them separately, to advise combination, or to publish them as a monograph supplement. Authors are advised not to submit the same manuscript to more than one journal.

Duplicate publication. Articles which have already appeared in another printed periodical of general circulation are not acceptable. Legitimate exceptions to the practice of forbidding duplicate publication, however, are recognized. Research done under contract with a government agency, for example, must often be reported in full in a special bulletin series published by the agency. Such material in abbreviated form may be submitted to a journal without prejudice.

Editing of manuscripts. Editors do not undertake the major editorial revision of manuscripts. Defective or excessively long papers are often returned to authors with detailed recommendations for their revision or condensation. Manuscripts which depart in appreciable degree from the style specified by this *Manual* are invariably returned for correction and retyping. In all cases the author is consulted about major changes. Minor changes, to improve details of expression or to correct minor errors of form, are sometimes made by the editor without consulting the author. Less frequently, they are made in the Publications Office, but in such cases the author is always consulted, either by query on the galley proofs or by direct communication, if the change could in any way alter the meaning of his material.

Order of publication. Articles are published in the order of their receipt, although they are sometimes accelerated or delayed by one issue. The usual reason for the slight advancement or delay of an article is the need to fill an "economical" number of pages in a particular issue. Printers do press work in "forms" of 32, 16, or 8 pages, and blank pages at the end of an issue are wasteful.

Certain exceptions to publication by order of receipt have been recognized by actions of the Council of Editors.

1. An editor may delay an article by more than one issue if the occasion for the delay involves some fault of the author.

2. An editor may advance or delay an article or articles by more than one issue for the purpose of assembling issues of homogeneous or highly related topics.

3. An editor may give advance publication to an article, without cost to the author, for any reason considered by him to be legitimate. Brief

articles of comment and rejoinder are often given such advance publication. More rarely, an article may be advanced because of its importance or timeliness.

4. The *American Psychologist* is exempt from the rule concerning order of publication because it must adapt its publication schedule to the requirements of official APA documents and reports and may give prompt publication to articles whose value depends on timeliness.

5. An author may secure the early publication of an article by paying the costs of publication, as described in the section on Early Publication.

Date of receipt of manuscripts. Every published article is accompanied by a printed statement of the date of its receipt. This date is ordinarily the date of the first receipt of the manuscript, provided the author makes any required revisions in time to meet a deadline set by the editor. If the author fails to meet the deadline, the date on which the revised manuscript is received is considered the date of receipt, and publication order is determined accordingly.

The *American Psychologist* and *Contemporary Psychology* do not publish receipt dates.

Publication lag. The "lag" is the interval between the receipt of an article and its appearance in print. A lag from 8 to 12 months is the goal of all editors, but when an editor begins to receive an increasing number of manuscripts, a longer lag can occur. A large backlog of accepted articles; the time needed for correspondence with authors about revisions, editing, and preparation; and printing all contribute to the publication lag. APA editors attempt to keep publication lag within bounds by several methods:

1. By insisting on the greatest brevity consistent with the adequate presentation of the material; by publishing meritorious longer manuscripts in monograph form; and by returning excessively long manuscripts for abbreviation (see Section 1.2 of this *Manual*).

2. By increasing the rate of rejection. This practice has the disadvantage, however, of setting relative instead of absolute standards, and of risking the loss of articles of value.

3. By recommending the auxiliary publication of long tables, figures, protocols, descriptions of procedure, etc. (see Section 6).

4. By encouraging early publication, which is described in a subsequent paragraph.

Cost of scientific publication. It is expensive to publish scientific journals. Their relatively small circulation and the complicated nature of the material they contain necessitate a continual struggle to produce and distribute them at prices their readers can afford. The APA journals are self-supporting

and their cost to subscribers is still moderate. The solvent financial structure of the journals is due mainly to the limitation of the annual number of pages of each journal to an economically practicable number.

Page allotments of journals. Each journal has an annual quota of pages, determined yearly by action of the Council of Representatives on recommendation of the Publications Board through the Board of Directors. A journal's page allotment is partly a matter of economics; consideration is also given to its publication lag, its rejection rate, the availability of other publication outlets, and the provable loss to psychology which might result from further delays or rejections. Each editor has an obligation to keep his journal within its page allotment and to prevent publication lag from becoming unduly long.

Early publication. An author may secure more prompt publication if he agrees to pay the cost of printing his article as additional pages of a journal, beyond its normal page allotment. An article accepted for early publication is inserted in the next issue to go to press. Usually any lag over 4 months is due to slow revisions by the author. To be accepted for early publication, an article must meet the editor's standard criteria of acceptability. Costs charged to the author are at a uniform rate per page for all APA journals, based on the average expense of printing. Information about the current charge may be obtained from the Managing Editor.

By action of the Council of Representatives, the policy of accepting articles for paid early publication is followed by all APA journals except *Psychological Abstracts* and *Contemporary Psychology,* to which the policy is irrelevant, and the *American Psychologist,* which, more frequently than other journals, publishes out-of-turn articles of urgent professional interest without charging the cost to the author.

Costs charged to authors. The author is charged the full cost of alterations or corrections which he makes on the proofs and which are the results of his own errors or preferences. At 1967 prices, the charge by printers for such corrections is at the rate of about $8.50 per hour. In preparing a manuscript, the author should bear in mind that even a very small change costs money. At present APA journals are published in greater part by linotype printing, and in such a printing operation the change of a single letter, word, or punctuation mark involves resetting an entire line. The author does not pay, of course, for the correction of errors made by the printer.

Reprints. Together with the galley proofs the author receives a reprint order blank, giving information about reprint prices. All reprints must be ordered when the proofs are returned, and the author is billed for their cost

at a later date. Reprints are usually run off by the printer after the issue has been printed and mailed, and often do not reach the author until 6 to 8 weeks after the issue date. APA journals allot 50 reprints of each regular article without charge to the author.

Preparation of Manuscripts

The following sections of the *Manual* describe the standards of style and form adopted by APA journals. Some sections are concerned with the broader issues of organization, literary quality, and the preparation of informative tables and graphs. Other sections are devoted to more detailed matters of form, such as headings, abbreviations, footnotes, and citation of references.

Requirements of style do not originate from the capricious whims of editors. Every manuscript must be uniform in style because printers are trained to follow copy almost slavishly. Printers set in type every letter, symbol, and punctuation mark exactly as it appears in the manuscript. Thus author and editor should make the manuscript as perfect as is possible before it goes to the Central Office staff for final copy editing. Useful comments by editors may be found in the *American Psychologist,* 1965, **20**, 711-720.

To permit indexing and cross-referencing, the following sections are numbered decimally.

1. *Organization and Writing*

1.1 *Abstract*

All APA journals except the *American Psychologist, Contemporary Psychology,* and, of course, *Psychological Abstracts* require authors to submit an abstract with each manuscript. The abstract should be typed on a separate sheet of paper and conform to the instructions set forth below. It is published at the beginning of the article and in many cases, but not all, takes the place of a summary at the end of the article. Many non-APA journals also follow this practice.

The abstract should not exceed 15 typewritten lines of pica or 12 lines of elite type when the line width is about 6 inches. This amounts to 100 to 120 words.

Except possibly for the first sentence which might read "An experiment . . ." or "A review . . .," all sentences should be complete. Avoid telegraphese. Do not repeat information from the title.

a. An abstract of a research paper should contain statements of the (*i*) problem, (*ii*) method, (*iii*) results, and (*iv*) conclusions. Results are most important, and every abstract should contain at least the trend or direction of results. It is also highly desirable to state the number and kind of subjects, the kind of research design, and the significance levels of results.

b. An abstract of a review or discussion article should state the topics covered and the central thesis, if any, of the article. It should be short, but informative. For example, "The problem was further discussed in terms of Hull's theory" and "Significant differences were found between experimental and control groups" are not informative statements. They should inform the reader of the direction of the difference and the nature of the theoretical discussion.

c. Do not use such phrases as "The author concludes," for it is assumed that statements in an abstract are those of the author.

d. All numbers should be in arabic, even at the beginning of a sentence. (See Section 4.5 for use of numbers in the body of the paper.)

e. A series of statements is designated by letters, for example, "Conclusions are: (a) . . . , (b) . . . , (c) . . . ," etc.

f. Standard abbreviations may be used. Others should be used judiciously to be sure the meaning is clear; for example, after once referring to "the Saturday practice group (SPG)," later write merely "SPG."

1.2 *Organization*

The goal of scientific writing is effective communication: to communicate abstract propositions, logical arguments, empirical observations, and experimental results, and their interrelationships and interactions. Clear organization is an especially important condition for such communication. Organization lightens the burden of the reader and helps him to understand the author's meaning. It distinguishes "figure" from the "ground."

An article should be organized in terms of a formal outline which provides a clear and logical sequence of communication. The author's outline can be made apparent to readers by the discriminating use of headings (see Section 3.3). Organization of experimental portions of articles has now become fairly standard. The principal divisions of such articles are: Problem, Method, Results, Discussion, and sometimes Conclusions or Summary. In some instances it is appropriate to use these words as centered headings, but more often the headings should be phrased to meet the particular requirements of a study.

1.21 *Introduction.* An adequate exposition of the problem should state the questions asked and the reasons for asking them. In reports of theory-testing experiments, the exposition should state the theoretical propositions from which the hypotheses to be tested are derived, give the logic of their derivation, summarize the relevant arguments and data, and state formally the hypotheses to be tested. This section does not require a heading.

1.22 *Method.* Method should be described in enough detail to permit the reader to repeat the experiment unless portions have been described in other reports which can be cited. This section should describe the design of the research, the logic of relating empirical data to the theoretical propositions, the subjects, the sampling and control devices, the techniques of measurement, and any apparatus used. Sometimes space limitations dictate that the method be described synoptically in a journal, and a more detailed description be given auxiliary publication (see Section 6).

1.23 *Results.* The section on results should give enough data to justify the conclusions. Special attention should be given to tests of statistical significance and to the logic of inference and generalization from empirical observations. Here again, auxiliary publication (Section 6) is desirable for supplementary tables of extended results.

a. Authors are cautioned against inferring trends from data which fail by a small margin to meet the level of significance adopted. Such results are most economically interpreted as a function of chance and should be reported as nonsignificant.

b. When a study reports the predictive validity of a method of measurement, the results must always show the degree of relationship between the measure and the criterion, and its practical value. The relationship should be reported in such terms as coefficients of correlation, cost-utility data, or expectancy tables. It is *not* sufficient merely to show that the relationship is nonchance in terms of the level of significance.

1.24 *Discussion.* The discussion should point out the limitations of the conclusions, note correspondence or differences between the findings and widely accepted points of view, and briefly give the implications for theory or practice.

Reports of research resulting in negative or unexpected findings should not end with long discussions of possible reasons for the outcome. Brief discussion is appropriate.

1.25 *Conclusions and/or summary.* The function of the summary has been to a large degree taken over by the abstract which accompanies each article. Occasionally, however, when the limitations of the abstract detract

from the exposition, the paper should end with a brief formal summary of the problem, the results, and the conclusions.

1.3 *Length of Articles*

The limited number of pages in APA journals available for an ever-increasing number of submitted manuscripts makes editors look with favor on conciseness. Discursive manuscripts which are longer than is necessary to convey clearly the author's message to the reader will commonly be returned for condensation. If lucid communication requires greater length, manuscripts somewhat longer than are commonly accepted will be considered on their merits and will not be rejected merely because of their length.

1.31 *Standards of length.* The average length of an article varies somewhat from one journal to another. To determine the average length of an article in a given journal, the author should read the editor's comments and instructions in a current issue.

Reviews of literature published in the *Psychological Bulletin* may be longer, but the upper limit is about 16,000 words unless special arrangements have been made with the editor.

Longer studies should be submitted to the appropriate journal as Monograph Supplements.

1.32 *How to reduce excessive length.* Some practical suggestions for abbreviating articles are:

a. No attempt should be made to review the history or the literature of an area in the introduction or in subsequent sections of an article. The reader should be referred to previous summaries. Only the results and arguments required to provide the context for one's problem should be presented, and these should be in synoptic form.

Because many articles originate from masters' theses and doctoral dissertations, a word is in order concerning the difference between a thesis and a scientific article. The function of the dissertation is to demonstrate a student's competence, and full documentation, historical development, complete tabular presentation, and reflective elaboration are often expected. In contrast, a scientific article has the function only of communicating the author's original contribution. Lack of space and economy of readers' time compel the exclusion of other materials.

b. Avoid waste of words or repetition. Try rewriting each paragraph more concisely but with the same substance.

c. Economize in the use of tabular material (see Section 5.1).

d. Present data only once. It is appropriate to refer to tabular data in

the text, but it is unnecessary to repeat data in the section on results, in the discussion, and/or in the summary.

2. *Quality and Style of Writing*

Good writing is clear, precise, unambiguous, and economical. It is readable; unless it invites readers to read, encourages them to continue, and makes their task easier, it is wasted effort.

To teach the art of writing is beyond the scope of the *Publication Manual.* It can only cite a few comprehensive references, point out common faults, and suggest how to assess and improve one's style of writing.

2.1 *References on Literary Quality*

Webster's Third International or *Seventh New Collegiate Dictionary* (1964). Essential for selection and spelling of words. (APA's Publications Office, since it must have one standard for all journals, uses this reference.)

A thesaurus (Roget, 1962) is useful in finding new words and in avoiding monotonous repetition, but must be used with caution to assure the selection of a word with the exact shade of meaning desired by the author.

Fowler (1965) discusses subtle distinctions of meaning and delightfully explodes faulty and trite expressions.

E. B. White's paperback revision (Strunk & White, 1959) of Strunk's *Elements of Style* provides a sound exposition of style as well as amusing reading. Woolley and Scott's (1944) handbook of composition offers aid on words, sentence structure, punctuation, paragraphs, and organization.

Flesch (1949) has popularized a formula for reading ease based on lengths of words and sentences. This approach to readability has been justly criticized; he does not, for example, give any attention to sentence structure. Nevertheless, a consideration of his point of view will encourage the use of short words instead of long ones, if possible, and maintain sentence length within proper bounds.

2.2 *Some Common Faults*

2.21 *Long, awkward sentences.* A clumsy sentence can be improved and often shortened by removing nonfunctional words, by restoring a logical order, and sometimes by dividing it in two. Examples:

Bad: The development of psychodiagnosis is not best served as long as we do not follow further the question as to what it is that the psychologist should identify in order to diagnose pathology.

Better: The improvement of diagnosis demands a clearer definition of the behavior to be identified.

Bad: The lack of negative deviation in the pathological group, however, would not appear to be anomalous in view of scoring standards which permit the earning of mediocre scores by those who give responses involving a low level of abstraction.

Better: The absence of a negative deviation in the pathological group is not surprising. The lenient scoring standards of the test awarded moderately high scores to responses displaying a low level of abstraction.

2.22 *Short, choppy sentences.* A reduction of sentence length is not a universal remedy for incomprehensible writing. Sentences can be too short and poorly integrated. Example:

Bad: Normal people can respond both abstractly and concretely. Abnormal people can respond only concretely. This is shown by the Goldstein-Scheerer test.

Better: Normal people are capable of both abstract and concrete responses to the Goldstein-Scheerer test, but abnormal people are limited to one mode of response, the concrete.

2.23 *The indefinite "this."* An illustration of this common fault appears in the bad example under *Short, choppy sentences.* Do not begin a paragraph with "This showed . . ." or "This study showed . . ." when the antecedent may be any part of the preceding paragraph. The topic sentence of a paragraph should be comprehensible in itself, even at the cost of repeating a name or a concept; for example, "Smith's study showed . . . ." The use of the pronoun "this" should almost always be avoided within a paragraph. Adjectival use within a paragraph, as in "This plan . . ." is sometimes permissible, but "The plan . . ." or "His plan . . ." is usually better.

2.24 *Strings of modifiers.* An awkward and often ambiguous construction results when a long string of modifiers is placed before the noun modified, especially when the modifiers are themselves nouns used as adjectives as in the following example:

Bad: A new type motor skills performance college test . . . .

Better: A new performance test of motor skills used in colleges . . . .

2.25 *Faulty words.* The best word, of course, is the one which conveys the exact meaning desired. Technical words must be chosen with care and must be used consistently. Nontechnical words offer a wider choice and a greater hazard. Scientific and scholarly writing is directed to a literate audience, and "difficult" words may be used when they are really needed to convey a precise meaning or to give variety. Always to be avoided, however, are (*a*) pseudosophisticated long words which are no more precise

than their short synonyms, (*b*) words warped from one part of speech to another and not yet acceptable to literary standards, (*c*) colloquial expressions tolerated in formal speech but inappropriate in formal writing, (*d*) coined words. A few illustrations are given; many other words are similarly misused.

	Bad	*Better*
a.	Pseudosophisticated words	
	is a desideratum	*is desirable*
	to utilize	*to use*
b.	Warped parts of speech	
	to contact (verb)	*to reach* or *meet*
	highs (noun)	*high-scoring students*
	rigids (noun)	*rigid subjects*
c.	Colloquial expressions	
	a write-up	*a report*
	a hook-up	*a circuit*
	to separate out	*to separate*
	a breakdown of data	*an analysis of data*
d.	Coined words	
	conceptuum	*concept*

2.3 *Some Requirements of Style*

The most basic requirement of style is adherence to the elementary rules of grammar and good usage. Psychologists who are already skillful and confident writers may follow their previously acquired standards with little hazard. For the less experienced, some explicit suggestions about the use of tense, person, voice, and number may have value.

2.31 *Tense.* Scientific reports are written mainly in the *past* tense. The literature cited has already been written, the study's procedure has been carried out, and the results have been obtained. The references, therefore, to previous research, the description of the procedure, and the statements of results should be stated in the past tense. Here are some examples:

Literature: "Smith's study found [*not* finds] . . . ."
Procedure: "The judges were [*not* are] told . . . ."
Results: "The mean difference was [*not* is] 12.3 points . . . ."

Certain statements should be written in the present tense. A useful rule is that the present tense, in a research report, indicates statements which have a continuing or general applicability. Definitions, statements from a

well-defined theory, and hypotheses are stated in the present tense. In stating the results of an experiment, whether in your own study or in an earlier one, the past tense refers to *particular* results applicable only to a sample, and the present tense refers to general or timeless results applicable to a population as confirmed by tests of significance. Illustrative examples:

Definition: "Webster defines . . . ." "In this study, a discrepancy *is* defined as . . . ."

Theory: "The Gestalt theory holds that . . . ."

Hypothesis: "It is hypothesized that intelligence *is* [*not* will be] positively correlated with . . . ."

Result: "Jones established [past tense, particular study] that auditory stimuli *are* [present tense, general finding] more effective . . . ."

The future tense is rarely, if ever, used in a research report. Avoid the error of stating procedures and hypotheses in the future tense, as if writing a prospectus.

2.32 *Person and voice.* Scientific communications are generally written in the third person, a custom which often gives trouble to inexperienced and insecure investigators. Such novices tend to an excessive use of "we" (a weak, inadmissible substitute for "I"), or flee into an involved and clumsy use of the passive voice. There are occasions, however, when use of the first person is permissible, even desirable. The remedy comes from attitude more than from rules. A good and mature writer is so vividly aware of his material and of the ultimate reader that he perceives himself chiefly as a link between the two. To gain objectivity in writing, it is sometimes helpful to write as though someone else performed the experiment, and that you are reporting what he did and found.

The passive voice is used extensively, especially in describing procedures. Do not, however, let the passive voice lead you into clumsy, involved expressions. Problems of person and voice are illustrated by these examples:

Bad: "We classified the subjects' responses . . . ." ("We" is faulty, unless it refers to two or more defined persons.) Never use "we" as a substitute for "I."

Better: "The investigator classified the subjects' responses . . . ." (The statement tells who classified the responses, but without self-consciousness. Third-person references to "the experimenter" or "the investigator" are usual and acceptable. References to "the author" or "the writer" are generally avoided as self-conscious, except in theoretical argument. In book reviews, one refers to himself as "the reviewer.")

Bad: "The classification of the subjects' responses was carried out by

dividing them . . . ." (Clumsy use of passive voice. The writing is self-conscious, emphasizing the process of classifying.)

Better: "The subjects' responses were divided . . . ." (Better use of the passive voice. The focus is on the research, not on the researcher.)

2.33 *Number.* Verbs must agree, of course, with their subjects, and pronouns with the nouns to which they refer. Inexperienced writers often have trouble with plural words of Latin origin which end in *-a,* especially "data," "criteria," and "phenomena." Although the word "data" may be evolving toward the status of a collective noun which may take a singular verb, conservative practice requires that it be treated as a plural word. The singular of data, "datum," is rarely used. The singular of criteria is "criterion," a respectable and useful word. Examples:

"The data *were* [*not* was] . . . . *They* [*not* it] showed that . . . ."

"Three criteria *were* used. *They were* . . . ."

"A criterion of senility *was* . . . ."

2.4 *Criticism and Assistance*

For many able research workers, writing is a difficult and irksome task. It is better to seek advice from others before submitting a manuscript than to hope that the editor will overlook faults or have time to correct them.

3. *Title and Headings*

3.1 *Title*

The title should be a carefully considered, concise statement of the exact topic of the article. Its aptness is essential to later indexing in *Abstracts,* ready reference for subsequent researchers, and in the editor's choice of a short title or running head (recto). That is to say, the author should avoid words that serve no useful purpose and unnecessarily increase the length. For example, a statement on the methods and results should not be included in the title, nor should the title begin with phrases such as "A Study of," or "An Experimental Investigation of." It is recognized that in some instances as many as 15 words may be needed to define the topic of the article (see Section 9 for directions on the title).

3.2 *By-Line*

Every manuscript should have a by-line containing two elements: the author(s), without "by," and the institution(s) where the investigation was made, without the prefix "from the." The author should always type his name as he customarily writes it, omitting titles (Dr. or Professor) and degrees (PhD, MD). The first author listed is the "senior" author. Author-

ship should be reserved to those who share in the scientific responsibility for the research. This issue is often quite complicated. Prospective authors should consult the APA Code of Ethics. Assistants should be indicated by a footnote.

The institution where the research was carried out should appear in the by-line with a footnote giving current affiliation. List the department only if it is not a department of psychology.

An author who has no institutional connection lists the city and state of his address below his name (see Section 9.16 for directions on multiple authorship).

3.3 *Headings*

The outline of an article should appear concretely in the manuscript as a series of well-chosen headings. The APA journals use as many as four orders of subordination in headings, but not all of them are required in every article; no others should be used. The four types of headings are, in order of precedence:

ORDER I: MAIN HEADING

Main headings are centered and typed in capital and small letters, with major words beginning with capitals. Do not type in all capitals. No period is used after the heading.

Order II: Second-Order Heading

Second-order headings are also centered, and the initial letters of main words are capitalized. In addition, the heading is underlined to indicate italics. These headings should be used only in longer articles as described in Section 3.31d; if used, write "Order II" in the margin.

Order III: Side Heading

Side headings are typed flush to the left margin with main words capitalized. These headings are also underlined. Text follows on the next double-spaced line and receives paragraph indentation.

Order IV: Paragraph heading. These headings are also known as "run-in sideheads." They are typed with a paragraph indentation. They have only the initial letter of the first word capitalized and are always underlined to indicate italics. They end with a period, and the text follows on the same line without extra spacing.

3.31 *Selection of headings.* Very brief and homogeneous articles may require no headings. If headings are used, the following rules should be observed.

a. One type of heading may be sufficient for a short article. In such cases, only main centered headings (Order I) should be used.

b. Two levels of headings meet the requirements of a great majority of articles. When two types are used, main centered headings (Order I) should always be selected, with either side headings (Order III) or paragraph headings (Order IV) as the subordinate level. Do not use Order II headings.

c. When three types of headings are required, they should be main centered headings (Order I), side headings (Order III), and paragraph headings (Order IV).

d. Use of four headings is suitable only for monographs, articles reporting a series of related experiments, and lengthy reviews of literature.

3.32 *Avoid initial headings.* Initial headings such as Introduction or Purpose are superfluous, inasmuch as all papers necessarily begin with an introduction, however brief.

3.33 *Numbering of headings.* The headings in articles submitted to journals should not be numbered or lettered. The varying styles of headings and their arrangement sufficiently reveal the organization of the paper. The decimal numbering of sections of the *Manual* is an exception, intended to permit indexing and cross-referencing.

3.4 *Other Methods of Subordination*

In addition to the use of headings, two other methods are commonly used to reveal an article's plan and outline.

3.41 *Smaller type.* Details of apparatus and method, instructions to subjects and judges, case material, and other subordinate matter, as well as all quotations over three typed lines, are set in reduced type size. This practice saves space and distinguishes the material (see Section 9 for directions).

Most editors prefer to make the final decisions with respect to the use of smaller type, and authors need only make sure that matter which might be set in reduced type is typewritten in appropriate paragraphs. The editor will add the instructions to the printer.

3.42 *Seriation of paragraphs.* Brief paragraphs describing successive steps of method, identifying groups, itemizing conclusions, and so on, are frequently made clearer by indication of serial order. Such paragraphs are numbered with arabic numerals, each followed by a period, but not enclosed in or followed by parentheses.

3.43 *Seriation within paragraphs.* Seriation within a paragraph or sentence should be shown by italicized small letters in parentheses. Do not use numerals in parentheses for this purpose.

4. *General Style*

When an editor or a printer refers to "style" in a manuscript, he does not ordinarily mean its literary quality, but its observance of recognized canons of spelling, capitalization, punctuation, abbreviation, and the like. The most important requirement concerning style is consistency. The author of a book may have considerable freedom to choose his style, provided he is always consistent. Journals, in contrast to books, print the works of many authors on adjacent pages and must therefore have more definite rules if glaring inconsistencies are to be avoided. To give an extreme example, what impression would be created if the vocabulary of the Wechsler Adult Intelligence Scale were designated within one issue of a journal as a subtest, a sub-test, a Subtest, a Sub-test, and a sub-Test?

Authors should take style seriously if their articles are to communicate effectively and to be acceptable for publication. There are several good references on style with which authors should be familiar. The University of Chicago Press *Manual of Style* (1949) is used widely. *Words into Type* (Skillin & Gay, 1948) contains sections on grammar and word usage, topics not included in most manuals. Other useful references are the style books of the Government Printing Office (1966), of the Modern Language Association of America (1951), and of John Wiley and Sons (1950). It must be noted that style books are often in conflict on minor issues. When there is disagreement, the instructions given in this manual hold for the APA journals.

The official dictionary of the APA journals is *Webster's Third International* (1964), and should be consulted in all problems of preferred spelling and the like.

4.1 *Capitalization*

There are many rules for capitalization and a general reference should be consulted. Some instances of problems in psychological journals are presented here.

Always capitalize the following:

a. Propietary names of drugs, equipment, and food.

b. Interactions (Time × Dosage).

c. Generic names or their abbreviations.

d. Titles of books (except in reference list); underline all words to indicate italics (see Section 8.12).

e. Names of journal articles in text; place article title within quotation marks.

f. Tests ("test," "scale," "schedule" "inventory") as they were originally published. For example, Porteus Maze Test, the Wechsler Adult Intelligence Scale, the Strong Vocational Interest Blank, and the Minnesota Multiphasic Personality Inventory should be capitalized as shown here. Sometimes shorter or inexact titles are used when referring in the text to an instrument. These titles are not capitalized; for example, the Rorschach test (but the Rorschach Diagnostic Test).

g. Names of university departments only when they refer to a specific department within a university (Department of Psychology, University of Washington).

h. Specific numerical variable (Day 2, Group 3, etc.).

Do not capitalize laws and theories.

4.2 *Compound Words*

Compound words may be written as (*a*) unbroken words, (*b*) hyphenated words, or (*c*) separate words. Modern practice, generally adopted by APA journals, favors the combined unhyphenated forms. For a full discussion, see the reference manuals (Skillin & Gay, 1948; United States Government Printing Office, 1966; University of Chicago Press, 1949). On particular words, consult Webster's (1964), which generally shows whether to use the unbroken or hyphenated form. Only a few cases of special interest to psychological journals can be cited here.

4.21 *Words formed with prefixes.* Words formed with prefixes — *bi-, co-, non-, over-, pre-, sub-,* and the like — usually do not require a hyphen. A general rule is to omit the hyphen unless the word is "unusual." Since technical journals use many words that would be unusual in newspapers and popular books but which are quite familiar to persons in a profession, they tend to use fewer hyphens. Here are a few examples of words that are not hyphenated in technical writing:

bipolar	postencephalitic
coeducation	posttest
nondirective	pretest
nonschizophrenic	reunite
overaggressive	subtest

Some exceptions which require the use of a hyphen are:

a. When necessary to avoid confusion of meaning:
re-pair (to pair again).

b. When the word to which the prefix is added is a proper name: *non-Freudian.*

c. When the word in which the prefix is added is hyphenated: *non-student-age peers.*

4.3 *Use of Italics*

When you underline a word in a manuscript, you are instructing the printer to set that word in italics. Italics should be used sparingly.

4.31 *Italics required.* Titles of published books and names of journals when used in text should always be italicized, as should names of genera, species, and subspecies; common and well-assimilated foreign words are not. Some symbols are italicized (see Section 4.65).

4.32 *Italics permitted.* When a new and important term is introduced, or when a key word early in a paragraph is stressed in lieu of a heading, the word may be italicized. This practice serves as a supplementary method of outlining.

4.33 *Italics discouraged.* Excessive use of italics for emphasis, imitating the stresses that can be made in oral speech, characterizes an immature style of writing. Give stress by headings, by paragraphing, and by the structure of sentences. Do not underline long phrases or whole sentences to give them prominence.

4.4 *Punctuation*

Punctuation is a complex topic, and standard references should be consulted (Skillin & Gay, 1948; United States Government Printing Office, 1966; University of Chicago Press, 1949). A few points that seem to give trouble in psychological writing are:

4.41 *Periods.*

a. Periods should be placed after abbreviation of given names (J. R. Smith), Latin words (i.e., et al., and e.g.), and units of measurement (mg., ft., sec.), except in mathematical expressions (1 kg/ml) and Greek letters used as abbreviations (3 mμ).

b. Use three spaced periods (ellipsis) when a word or a group of words within a sentence is omitted from quoted material, being careful to leave a space before and after, thus: "The rate ate . . . the pellet." If the omitted words begin a sentence, no ellipsis is necessary. If the omitted words end a sentence, place the ellipsis before the period . . . . If the omitted words begin the first part of the second sentence in the quotation, place the

ellipsis after the period. . . . Notice the spacing after the word period in the two preceding sentences.

c. Omit periods after capital-letter abbreviations of names of chemical compounds (RNA), government agencies (NIH, VA, NSF), societies (APA), international agencies (UNESCO), and degrees (PhD).

4.42 *Commas.* Technical writing should be "tight." In an enumeration of three or more items, use a comma before the *and*: "the height, width, and depth . . . ."

There is often confusion as to whether a clause should be set off by commas. A *defining* clause, which limits the meaning of the word it modifies, does not use commas. (Example. "the switch that stops the recording device.") A *nondefining* clause, not limiting the meaning, is set off by commas. (Example: "the switch, which was placed on a panel, controlled . . . .")

4.43 *Hyphens.* The hyphen, even aside from its use in compound words, is a demon among punctuation marks. (See also Webster's for frequently used compounds.) Perhaps a few examples will help.

a. A compound modifier is hyphenated when ambiguity may be avoided thereby: characteristic of client-centered counseling . . . .

b. The same word groups, however, are not hyphenated when they do not constitute a modifier:

the counseling is client centered . . . .

used a control group . . . .

c. When two or more compound words have a common base, the base may be indicated in all but the last by a hyphen. Note the space following the first hyphen in the illustrations.

a fourth- or fifth-grade class

2- and 3-year-olds

the pre- and posttests

d. Fractional expressions use the hyphen: one-half; four and five-sevenths.

e. The compounds of *self* are always hyphenated: "self-conscious," "self-evident," and "self-concept."

4.44 *Dash.* In typescript, the dash is always indicated by two hyphens, not one. Do not leave a typewriter space before or after the hyphens or between them.

4.45 *Quotation marks.* In American practice, double quotation marks are used to indicate primary quotations, whether of a single word, or of one or two sentences. There is a common misconception that a single

word is placed in single quotation marks. Not so! Example: "nervous" rats . . . .

Quotations within a quotation are enclosed in single quotation marks if the whole quotation is in double quotation marks. Example: The experimenter reported, "When I said, 'Ready, go,' in a loud voice, the subject was startled."

When a quotation is set off from the text in reduced type, quotations within it are enclosed in double quotation marks.

In American typographic practice, it is universally accepted that the period and the comma are *always* placed before the closing quotation mark, even when the quotation marks enclose only a single word. Failure to follow this rule results in costly copy editing or proof correction. Examples: The subjects were "nervous," even between trials. "He repeated, 'Think, think'." Colons and semicolons are always placed after the quotation mark. A question mark is placed after the quotation mark, unless the question is itself part of the quoted material.

Contemporary Psychology uses both double and single quotation marks distinguished as follows. Double quotes are used when the quoted material is specific as to time and place if spoken, or as to place if printed. Single quotes are used for looser approximate quotations, or when a word or phrase is used about which the writer is apologetic or humorous. Examples: Smith refers to the behavior as "deviant." (The reviewer is quoting a word exactly as used in the book.) Occasionally Jones becomes a bit 'preachy.' (The reviewer is indicating an apology for using a word which he does not like, but which expresses a conventional meaning.)

4.46 *Parentheses.* Parentheses are used to set off comment or explanation that is structurally independent of the sentence, to group mathematical equations (parentheses are placed inside brackets), to label enumerations included within a paragraph. One set of parentheses is never enclosed by another except in mathematical equations. Brackets are used in place of parentheses within parentheses, but are to be avoided by the use of commas or dashes whenever possible as in the following example. (For a further discussion, see Jones, 1949, p. 111.)

4.5 *Numbers*

Numbers less than 10 are ordinarily spelled out. Write "used three (*not* 3) groups . . . ." However, there are several specific exceptions: Numbers less than 10 are given as numerals when they come in a series

such as 3, 8, 11, and 17; when they indicate page numbers and dates; when they are comparable to two-digit numbers used in the same paragraph; express scores or percentages; or precede a unit of measurement such as 3 feet, 2 days, or 7-point scale.

Exact numbers of more than one digit are given in arabic numerals, such as 2.3.

Never begin a sentence with an arabic numeral (except in abstracts), even if other numbers follow. For example, you must write: "Forty-three men and 38 women replied." Usually it is better to recast such sentences, as: "Replies were received from 43 men and 38 women."

4.6 *Abbreviations and Symbols*

4.61 *Abbreviations.* In scientific writing, abbreviations are used for many technical and statistical terms. Very helpful lists of abbreviations of psychological terms and units of measurements frequently used by psychologists are given by Daniel and Louttit (1953, pp. 386-398). For a discussion of abbreviations and for lists of commonly used general abbreviations, see the reference on style (Skillin & Gay, 1948; United States Government Printing Office, 1966; University of Chicago Press, 1949).

a. Longer technical terms and names of techniques, if they occur frequently in a particular paper, are spelled out when first used and followed by their abbreviations in parentheses. Thereafter, only the abbreviation is used without parentheses. For example, an author refers to the reaction time (RT) or to the Peabody Picture Vocabulary Test (PPVT). The abbreviations consist of all capital letters without spaces or periods. Some other common examples are: AGCT, EKG, MMPI, and WISC. Care must be exercised, however, that more is gained than is lost by using abbreviations. For example, the use of "Hi" for "High" saves very little in space and loses meaning.

b. In the *Journal of Experimental Psychology,* the *Journal of Comparative and Physiological Psychology,* the *Journal of Abnormal Psychology,* and the *Journal of Applied Psychology* standard units of measurement (electrical, statistical, etc.) preceded by a number are abbreviated.

4.62 *Abbreviation of experimenter, subject,* and *observer.* In APA journals, the word experimenter is often (always in *Journal of Experimental Psychology* and *Journal of Comparative and Physiological Psychology*) abbreviated *E*; subject, *S*; and observer, *O*. Care must be taken to distinguish between the plural forms of these abbreviations, which add the letter

s without an apostrophe, and the possessive forms, which use an apostrophe. Examples:

E, experimenter	*S*, subject
*E*s, experimenters	*S*s, subjects
E's, experimenter's	*S*'s, subject's
*E*s', experimenters'	*S*s', subjects'

In typing these abbreviations, the capital letters *E*, *S*, and *O* are underlined to indicate italics, but the small letter s which shows the plural or possessive form is *not* underlined and is printed in roman type.

4.63 *% and percentage.* The percent sign (%) is used to indicate percentage quantity. The word percentage is used when a number is not given. Examples: "found that 18% of the subject . . . ." "determined the percentage of subjects that . . . ."

For economy, the % sign is always used with conventional Rorschach symbols, as *A%*, *F+%*, etc.

4.64 *Symbols.* Letters used as statistical symbols should ordinarily follow standard American practice, as defined by Dunlap and Kurtz (1932), Kurtz and Edgerton (1939), and most textbooks on statistics. Letters with bars, wavy lines, or dots above or below them should be avoided unless the author believes them essential. They cause the printer trouble and therefore add to expense. Greek letters and subscript and superscript letters or numbers may be used.

4.65 *Typing symbols.* Letters used as symbols for statistical concepts, and also for certain conventional test scores, are italicized in print and therefore must be underlined in the manuscript. Do *not* enclose such symbols in quotation marks. Examples: *t*, *N*, *df* (degrees of freedom), an *F* ratio, a *T* score, a *Q* sort; the *W*, *d* or *F%* of the Rorschach; the *Hs* and *Pd* scales of the MMPI.

Do not join such a symbol to the following related word with a hyphen, unless the symbol and word constitute a modifier. (The principle is the same as that stated in Section 4.43a, 4.43b.) Examples: The *t* test (not *t*-test) showed . . . A *Q* sort (*not Q*-sort) was made . . . ; but: The study used the *Q*-sort technique.

Special symbols, such as those used in Hull's behavior theory, should be carefully hand printed, without crowding, so as to be optimally legible to the editor and to the printer.

4.66 *Formulas.* Because statistical and other mathematical formulas are expensive to set in type, they should not be given unless new or rare, and essential to the author's argument. Common statistical procedures

should be used without explanation or reference. Less common formulas and procedures should be accompanied by a reference to a book or article in which they may be found.

Unless an essential statistical formula can readily be introduced into a single line of typewriting (e.g., if it has no fraction signs or complex exponents), it should be placed on a widely spaced line by itself. If the formula is too complex to be typed clearly, it should be *carefully* lettered by hand. Pay special attention to the clear alignment of fractions, exponents, and subscripts.

4.67 *Numbering of formulas and/or equations.* Formulas and equations should be numbered consecutively, the number placed in brackets to the right of the formula to which it refers. When referring back to these formulas and equations, they should be designated as Formula 1 or Equation 3, etc. (see Reisman, 1962).

4.7 *Footnotes*

Use of footnotes should be kept to an absolute minimum except for the specific purposes outlined below.

Avoid the temptation to bring in questionably relevant material or parenthetical discussions by using footnotes. Generally, such content should be omitted. When clearly pertinent, it usually can be integrated with the text.

4.71 *Numbering and placement.* Footnotes to the text, including those attached to the title and to authors' names, should be numbered consecutively throughout the article with superscript arabic numerals unless there are several citations to one footnote within the text. If a footnote is repeated in the text, the second citation should be in parentheses (see Footnote 3) in place of the superscript. Do not use asterisks, etc.

a. Acknowledgment of support. A footnote naming the sponsor of a grant or contract, the grant or contract number, acknowledgment, and occasionally the location is noted to the title.

b. Acknowledgment of assistance and change of affiliation. The superscript arabic number is placed after the last author's name for a general acknowledgment of help in the preparation of the manuscript. Also, when the author has moved to a new location since the writing of the article, his new affiliation is indicated by a footnote (see Section 3.2). The footnote should read "Now at the University of Kentucky." Both of these information items may be combined in one footnote.

c. Location. In rare instances, when there is an elaboration of the author's affiliation, the footnote number should follow the location.

d. Text. There are several types of textual footnotes that have a specific style. The following examples should be self-explanatory: (*i*) Unpublished study entitled "Sensory Measures," 1960, (*ii*) J. Jones, personal communication, June 12, 1958, and (*iii*) NAPS footnote (see Section 6.2).

4.8 *Appendixes*

An appendix has no place in a journal article. Material thought suitable for appendixes should be deleted, integrated with the text in abbreviated form, placed in a table, or, perhaps best, be given auxiliary publication (see Section 6.2).

5. *Tabular Presentation*

Good tabular presentation sets forth quantitative data systematically, precisely, and economically by the skillful combination of the elements of a table. Effective tabular presentation facilitates comparisons both within the table and among the tables. A table should be self-explanatory and should supplement, not duplicate, the text.

5.01 *References on tabular presentation.* A worthwhile reference on tables is McNemar (1962). Walker and Durost (1936), although now old, is specifically oriented toward statistical presentations in education and psychology, and includes a chapter on the analysis and criticism of tables.

5.1 *Prepare Tables in Condensed Form*

Statistical data should be presented in the most highly condensed form that permits effective communication. The units that are used to determine the numbers should be clearly stated in the column headings, so that the tables are fairly complete by themselves. Do not include columns of data that can be calculated from other columns (see Table 1). Ordinarily, an identical column of figures should not appear in two tables. When two tables overlap, consideration should be given to the feasibility of combining them into one. In most cases a row or column of a table which contains few entries can be eliminated by a footnote to the table.

5.2 *General Mechanics of Presentation*

a. Each table should be typed, double spaced, on a separate page.

b. The word *Table* and its arabic number should be centered at the top of the page.

c. The table title should be centered, capitalizing the initial letters of the principal words. If the title contains more than one line, each line should be centered on the page.

TABLE 1

ANALYSIS OF VARIANCE: STUDY III

Source	*df*	*MS*	*F*
Minerals (A)	7	357.62	60.82*
Concentrations (B)	1	665.16	139.15*
Subjects (C)	55	40.31	
A × B	7	32.69	11.43*
A × C	385	5.88	
B × C	55	4.78	
A × B × C	385	2.86	

Note.—Reprinted from an article by William H. Bruvold and Rose Marie Pangborn published in the February 1966 *Journal of Applied Psychology*. Copyrighted by the American Psychological Association, Inc., 1966.

* $p < .01$.

d. Column and stubheadings should be centered, capitalizing the initial letter of the first word.

e. All footnotes, general and specific, and probability levels should be typed, paragraph indented, double spaced, at the foot of the table.

f. Rule each table completely, including horizontal and vertical lines, in light pencil. Make *no* heavy rules.

g. Indicate the position of the table in the manuscript, thus:

Insert Table 1 about here

---

h. All tables should be referred to by number in the text: Table 1, Table 2, etc. Avoid reference to "the table on page . . ." or "the table above," etc., since the position and page number of a table cannot be determined until page proof has been made up.

5.3 *Parts of a Table*

All tables must have a title and a number, boxhead, stubhead, and field. In addition, many tables have footnotes.

5.31 *Table title.* Every table should have a brief but clear and distinc-

tive title. Use a "telegraphic" style of writing, making sure that stylistic consistency is maintained between various table titles.

The table subtitle, if any, should be centered below the title with the initial letter of each main word capitalized.

5.32 *Table number.* Tables are numbered in arabic (not roman), consecutively from the beginning of the article to the end, excluding the appendix. In the few cases where an appendix is considered necessary, tables should be designated by capital letters. Avoid the use of suffix letters to indicate relationships between tables; do not refer to Tables 5, 5A, and 5B, but to Tables 5, 6, and 7.

5.33 *Stubhead and stubcolumn.* The stubhead serves to classify or describe the principal line captions of the stub. Always use a stubhead; if the stub listings are heterogeneous, "Item" may be used. The stub listings should be as definitive as space permits and are uniformly nouns, verbs, or verbal nouns, etc.

Subordination should be indicated by indentation rather than creation of an additional column at the left. Main sideheads should be flush, with the overrun line indented two spaces, and the subordinate headings or line captions indented four spaces.

5.34 *Boxhead.* The boxhead may contain two parts, the individual column head and a heading which spans two or more column heads. Care should be taken to center each heading over its appropriate column(s) in order to avoid faulty alignments. Boxheads are generally expressed in a concise telegraphic style in the singular and are abbreviated where possible.

5.35 *Field or body of the table.* Principally, the field or body contains the numerical data. For economy, as well as for statistical precision, do not express quantities to a number of digits beyond their significance. The field may also contain a heading which spans the entire table and which appears centered below the boxhead.

5.36 *Planning a table.* Care should be taken when planning a table to avoid pencillike tables or ribbonlike tables as they are inefficient and unattractive.

5.3 *Table footnotes.* There are three types of footnotes: general, specific, and probability level. A general note, designated by the word "Note" followed by a period and dash, qualifies, explains, or provides information relating to the table as a whole. Specific footnotes refer to a particular column or individual entry. They are indicated by superscript small letters, [a], [b], [c], . . . used in order, with the footnotes arranged alphabetically by their superscripts. Footnotes to a table are independent of any other table and should begin with [a] in each table.

TABLE 23

ANALYSIS OF VARIANCE FOR EXPERIMENTAL AND CONTROL GROUPS

STUB-HEAD	BOXHEAD
	COLUMN HEADS
SPANNER	
STUB COLUMN	FIELD OR BODY

TABLE 2

STRENGTH OF HYPOTHESES IN LS PROBLEMS

Group	Hypotheses								
	Position preference	Position alternation	Win, stay; lose, shift (position)	Lose, stay; win, shift (position)	Stimulus preference	Stimulus alternation	Learning on Trial 2	Learning on Trial 3	Random responding
Present study: tactual problems									
Normals	.110	.060	−.040	.018	.070	−.010	.008	−.020	.738
Frontals	.322	−.008	.088	.000	.098	−.062	−.050	.000	.612
Present study: visual problems									
Normals	−.040	.004	.072	−.056	.142	.016	.358	.112	.392
Frontals	.005	−.015	.045	−.038	.025	.038	.395	.112	.432
Brush, Mishkin, & Rosvold (1961) study									
Normals[a]	.010	−.002*	.032	−.002	.012	.018	.658*	.102	.172
Frontals[b]	.088	−.005	.038	−.022	.190*	.005	.265*	.078	.365*
Temporals[c]	.018	.060*	.028	−.048	.100	.005	.398*	.102	.338

Note.—Hypothesis strength is based upon analysis of the first three trials of each problem.
[a] Comparison with temporals.
[b] Comparison with normals.
[c] Comparison with frontals.
* $p < .05$.

FIG. 1. Identification of the major parts of a table. (Table 2 is reprinted and edited from an article by Marlene Oscar and Martha Wilson appearing in the August 1966 *Journal of Comparative and Physiological Psychology*. Copyrighted by the American Psychological Association, Inc., 1966.)

Asterisks are used to indicate the probability level of tests of significance. When two or more levels are used, the lower level of significance should be given the single asterisk. Examples:

$$*p < .05.$$
$$**p < .01.$$

6. *Auxiliary Publication*

Auxiliary publication is a resource for making available materials that cannot economically be included in a printed article or monograph. Materials appropriate for auxiliary publication may include protocols or original observations, tabulations of original data, tables giving complete detailed data (frequency distributions, detailed findings for numerous subsamples, intermediate matrices of factor analyses, etc.), detailed drawings of apparatus, large-sized charts, and photographs (including color photographs).

The essential steps of auxiliary publication are (*a*) to place the materials where they will be available to interested specialists, and (*b*) to publish a notice of their availability.

6.1 *Local Auxiliary Publication Resources*

6.11 *Private reproduction not desirable.* To reproduce materials privately is usually not feasible because of the expense involved, nor is it desirable since there is no assurance that the materials will be available to scholars at a later date. Therefore, editors generally discourage the insertion of footnotes in articles stating that further materials are available from the authors.

The *Journal of Consulting and Clinical Psychology* allows such footnotes to indicate where to secure a more extended account of the studies published as Brief Reports, but the extended report is also filed with the NAPS to ensure its availability.

6.2 *National Auxiliary Publications Service*

The best resource for auxiliary publication is the National Auxiliary Publications Service (NAPS), now operated as a service of the American Society for Information Science.

6.21 *Preparation of materials for the NAPS.* Materials for transmission to the NAPS should be adapted to photographic processes. A white background is best. Drawings should be in jet black ink. Photographs should have good contrast. Typewritten materials should be sharply defined, not faint or blurred. Carbon or pencil copies are undesirable for several reasons. Blue ink is not acceptable because it cannot be photographed.

Typewritten materials may be single spaced for economy but should not be crowded. Pages of standard typewriter size are preferred for filing, but other sizes are received when essential. The name, institutional connection, and permanent address of the author should appear conspicuously on the material.

Tables to be deposited with the NAPS are designated as Table A, Table B, etc., and figures as Figure A, Figure B, etc. The text of the article may refer to them by using these letters as identification. Referring to such tables and figures by letters distinguishes them from those printed in the article, which are numbered with arabic numerals.

6.22 *Notice of availability.* The NAPS accepts materials to which reference is made in an article published for general circulation. The author should include a notice of availability in his manuscript, usually in the form of a footnote reading substantially as follows:

[1] A five-page table giving data for each of the subgroups (or other described material) has been deposited with the National Auxiliary Publications Service. Order Document No. ____ from National Auxiliary Publications Service of the American Society for Information Science, c/o CCM Information Sciences, Inc., 22 West 34th Street, New York, New York 10001. Remit in advance $_____ for photocopies or $_____ for microfiche and make checks payable to: Research and Microfilm Publications, Inc.

The technical editors add the document number and prices to the footnote when the information has been supplied by the NAPS, *after* the galley proofs have been returned by the author(s).

6.23 *Send NAPS materials to the journal editor.* Materials to be deposited with the NAPS in connection with an article should always be sent to the journal editor with the manuscript. The editor needs to see them when judging the acceptability of the article. Editors have arrangements to deposit materials with the NAPS through the APA Publications Office.

7. *Preparation of Figures*

Graphs are the most economical and intelligible mode of presentation for certain types of data, and should be used when they substantially increase understanding in the text. Graphs, charts, and photographs, however, are expensive both to the author and to APA. Also, their design and preparation seem to cause considerable difficulty to many authors. The author should therefore ask with respect to every graph or photograph presented for publication: Is this figure necessary? Is it economical of journal space? Is it prepared with quality suitable for publication?

It is highly recommended that authors secure the services of a professional draftsman, if possible. Most psychologists do not have the technical skill required to produce a satisfactory figure.

7.1 *Figure Captions*

7.11 *Numbering figures.* All figures, whether graphs, drawings of apparatus, or halftones, are designated as figures and are numbered consecutively in arabic numerals throughout an article.

Terms such as "Graph 1" or "Chart 1" are not used. In rare cases when special full-page illustrations are used in a series separate from the other figures, they may be designated as "Plate 1," "Plate 2," etc.

In the text, always refer to figures by their numbers, for example, "(see Figure 1)." Never cite "the following" figure, or the figure "above" or "below." Do not abbreviate the word "figure" except in the caption. For the designation of figures to be deposited with the NAPS, see Section 6.21.

7.12 *Showing location of figure.* In the text, show the location of each figure by a clear break in the text, with instructions set off by lines above and below; for example:

Insert Figure 1 about here

7.13 *Typewritten figure captions.* The numbers and captions of figures are *never* lettered on the graph itself. Titles and captions are typewritten on a separate sheet, double spaced if more than one line is required, and labeled "Figure Captions."

Titles should be kept as short as possible, and should not contain explanatory notes which duplicate the legends of the graph or the explanations in the text. It should be remembered that the figure is introduced as an elucidation of the text, and although the graph itself should contain all necessary identifying legends, its interpretation assumes the reading of the text. It is never necessary to include in the legend a statement referring the reader to the text for details.

7.14 *Identification of the figure.* On the margin of the back of every drawing and photograph submitted, the author should write lightly in pencil his name, the title of the article, and the figure number. These entries identify the figure to the printer. Be careful that the writing does not deface the front of the figure.

If there is any possible ambiguity, as in the case of figures that have no

lettering, the author should write "top" lightly in pencil just above the drawing, to show its spatial orientation.

7.15 *Duplicate figures.* To facilitate referral to consulting editors, the figures as well as the typewritten parts of manuscripts must be submitted in duplicate. The original figures must be fully prepared for reproduction according to the instructions given in this section of the *Manual.* The duplicate figures should preferably be photographic or photostatic copies, but clear pencil-drawn drafts are also acceptable as duplicates.

7.16 *References on graphic presentation.* The most complete and detailed source for the principles, layout, and drawing of figures is a pamphlet issued by the American Standards Association (1959). It contains illustrations of good and bad practices. Some statistics textbooks contain sections on graphic methods, and there are several extensive texts or manuals (Brinton, 1939; Haskell, 1919; Williams, 1926).

7.2 *Size and Proportion of Figures*

All figures should be constructed with reference to the size of the journal's page, especially to the width of the column of type. Most figures will be reduced at least 50%, and, therefore, spacing and lettering should allow for this reduction in order to avoid an unnecessary double-column figure (see Figure 2). Figures should be submitted on 8½ x 11 (or 8 x 10½) inch paper. Figures for a given article should have comparable scales on the axis.

7.3 *Drawing and Lettering of Graphs*

a. Use a good grade of white drawing paper and black India ink. If graph paper is used, only blue-line grid paper is acceptable since blue grid lines do not photograph. All lettering should be done professionally or with a stencil (Leroy, Wrico, or Ames Lettering Devices). These devices will also provide a guide to size and proportion of all the lettering contained in the figure. Freehand and typewritten lettering is not acceptable. All lines should be clear and sharp, show a uniform degree of blackness, and be proportionate to size of the graph.

b. Vertical and horizontal axes should be heavy lines. Generally, the independent variable is plotted on the horizontal axis, and the dependent variable on the vertical axis.

c. Axes should be labeled clearly with both quantity measured and units in which it is measured.

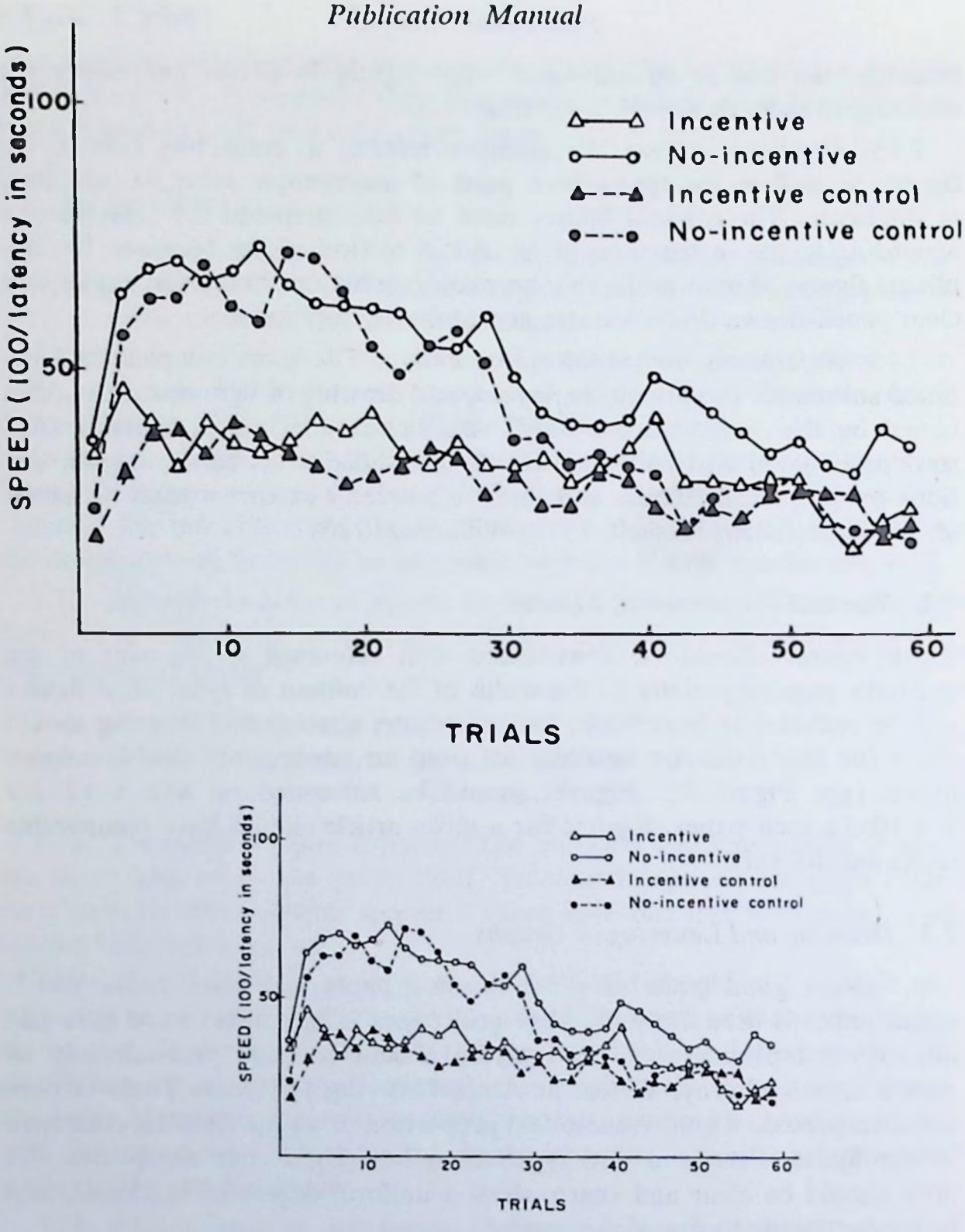

FIG. 2. Example of figure reduction showing the original size (double column) and 40% of size (single column). (Note the larger drawing's proportionately larger lettering which clearly points out the need for proportionate scaling on the original figure in order to obtain maximum reduction without the loss of clarity in the smaller figure.) (Reprinted from an article by Franklin Nelson from the October 1966 *Journal of Comparative and Physiological Psychology*. Copyrighted by the American Psychological Association, Inc., October 1966.)

d. A legend should be placed parallel to the proper axis. All numbering or lettering of grid points on the horizontal and vertical axes should be horizontal.

e. Distinct geometric forms should be used for plot points; for example, circles, squares, etc.

f. No more than four curves should appear on any given graph. Special attention should be paid to spacing between and within curves since space between points will be proportionally less when the figure is reduced.

g. Grid scale should be chosen with reference to the purpose of the graph, to the range and scale separation to be used on vertical and horizontal axes, and to overall dimensions of the graph so that plotted curves reach across the entire illustration.

h. Scale values are indicated by grid marks placed on each axis at appropriate intervals.

7.4 *Bar Graphs*

Since bar graphs merely represent numerical quantities in visual form, their use in scientific publications is rarely justified if they present data which appear elsewhere in numerical form. If they are used, however, the same rules for preparation of a line drawing should be used.

7.5 *Reproduction of Photographs*

All photographs are reproduced by making a copy on metal, called a "halftone," of the original furnished by the author. Invariably some detail is lost in making halftones; therefore high-contrast, glossy, black-and-white prints are the most desirable. Great care should be taken in the original preparation of the figure to develop a suitable background and contrast in order to bring out important features of a figure. All photographs should be professionally prepared and retouched before being submitted for publication. Only necessary parts of a halftone will be reproduced. When submitting a photograph, indicate lightly in pencil the area which can be cropped, but do not cut the photograph yourself.

8. *References*

Every references cited in the text must appear in the reference list at the end of the article. Each entry in the reference list must contain all data necessary for identification and library search, and each must be cited in text. For understanding of the reference style of a particular journal,

authors should consult recent issues of the journal for which the manuscript is being prepared. In the illustrations used within this section, authors' names and article and book titles are fictitious. Each line in the reference list should be typed double spaced, and the list should be on a separate sheet.

8.1 *General Rules*

8.11 *Accuracy of citation.* Accuracy and completeness of citations is of major importance. The purpose of listing the references is to make possible their use by the reader; this purpose cannot be accomplished if the reference data are incorrect or incomplete. The list of references should be carefully checked against the original publications. If original sources are unavailable, but the reference is important enough to be included, the secondary source from which it was secured should also be indicated. Special attention should be given to spelling of proper names, spelling of words in foreign languages (including accents or other special marks), correct journal titles, years, volume numbers, and pages.

8.12 *Capitalization.* Only the initial letter of the first word of the title of a book or article is capitalized, with the following major exceptions: (*a*) The first word of a secondary title following a colon is capitalized (e.g., Studies in perception: A new method); (*b*) proper names, German nouns, etc., are capitalized; (*c*) the first word of a title within a title (e.g., Report on "Cognitive versus inhibitory learning").

8.13 *Punctuation.* Special attention should be given to accuracy and uniformity of punctuation. Titles are not enclosed in quotation marks.

8.14 *Italics.* Only book and journal titles should be underlined to indicate italics.

8.2 *Arrangement of References*

8.21 *Heading.* The list of books and articles cited should be labeled *References,* or, if only one book or article is cited, *Reference.*

8.22 *Authors' names.* Arrange entries in alphabetical order by author's surname, or for multiple authors by the name of the senior (first-named) author. (*a*) Names are given in inverted order — followed by the initial or initials only for both male and female authors (e.g., Clarke, P., *not* Clarke, Peter). For married women, use the surname as given in the publication cited. In typing, each initial is followed by a period *and a space.* Failure to space between initials is a common error. (*b*) In the case of multiple authorship, the inverted order is used for all names, with each

name separated from the preceding name with a comma. The final name is preceded by a comma and an ampersand (&). (*c*) References to an author alone stand first, followed by those of which he is the senior author. References with one senior and different second or third authors are arranged alphabetically by the surname of the second author, etc. (*d*) Several references to the same author or authors are arranged by year of publication, the earlier first. References of the same year are arranged alphabetically by title (excluding "a" or "the"), and lower-case letters in parentheses — for example, (a), (b), etc., — are placed after the final period of each such entry. Note that the author's name is repeated in each entry in the following examples; *do not* replace the name by a dash.

Jones, C. L. Proprioceptive stimuli. *Journal of Experimental Psychology,* 1957, **54**, 27-30.

Jones, C. L. Perception of space. *Journal of Experimental Psychology,* 1958, **56**, 3-17. (a)

Jones, C. L. Space factors. *Journal of Applied Psychology,* 1958, **42**, 91-102. (b)

8.23 *Entries with no personal author.* Entries for which no person is indicated as author may be divided into three classes: (*a*) corporate author indicated, (*b*) article signed "Anonymous," and (*c*) neither of the preceding.

a. When a corporate author is clearly indicated, the accepted practice follows. Examples will be found in the list of references at the end of this manual, specifically ASA (1959).

i. A corporate author may be an association, a government agency, a business firm, etc.

ii. The full official title of the corporate body should be used; for example, American Psychological Association, Psychological Corporation, United States Department of Defense.

iii. A subdivision of a larger unit is entered with the larger body first and the subdivision following; for example, American Psychological Association, Policy and Planning Board; University of Michigan, Department of Psychology.

iv. Corporate authors are arranged in proper alphabetical position with personal authors.

b. Articles signed "Anonymous" are arranged with this word as name entry in the alphabetical list.

c. Entries for which no author is evident should be arranged by title (disregarding the articles "the," "a," "an") in the alphabetical list. Ex-

amples will be found in the list of references of this manual, specifically Webster's (1964).

8.24 *Rules for alphabetization.* The following rules govern special cases of alphabetization: (*a*) Prefixes M', Mc, and Mac should be alphabetized as they actually appear; that is to say, Mc should appear in its logical order in the list and not as though spelled Mac. Abbreviations such as St. and Ste. should also be alphabetized as they appear, and not as though spelled out. (*b*) Compound names are alphabetized under the first part of the name: for example, Kloos-Knies, P.; Lewis-Jones, H. (*c*) Article and preposition prefixes (de, la, du, von, van der, della, etc.) govern alphabetical position according to different rules for different languages. Inasmuch as the prefix when included in Anglicized usage is commonly spoken as part of the surname, the APA journals alphabetize according to the prefix. In certain names—for example, (von) Helmholtz—the prefix is not customarily used in English and the alphabetization then disregards it. (*d*) Certain languages have roman letters not in the English alphabet — Danish æ, ø, and aa; Norwegian æ, ø, or ö, and å or aa; Swedish å, ä, and ö; and Spanish ch, ll, rr, and ñ. Strict rules would require proper alphabetization according to their language, but practical considerations have dictated that APA journals alphabetize them as though they were accented variations of roman letters. This practice is analogous to usage for transliterations from nonroman alphabets.

8.3 *Forms of Book Entries*

Most of the needed instructions can be obtained from the examples which follow. Books that are published annually, such as the *Annual Review of Psychology,* are considered periodicals (see Section 8.4). A few special directions are:

a. Place of publication. Give only the city if the name is distinctive and well known. Give the city and state (or city and country) if there are several cities of that name (e.g., Springfield, Ill.) or if the city is obscure.

b. Publisher's name. Give in as brief a form as will be fully intelligible; for example, McGraw-Hill, not McGraw-Hill Book Co. (but Ronald Press).

c. Citing pages. Particular pages of a book are never cited in the reference list. Specifiic page references to identify a quotation are given in the text (see Section 8.6).

8.31 *Book.* Cite author, title, city, publisher, and year, in that order.

Jefferds, C. V., Jr. *The psychology of industrial unrest.* New York: McGraw-Hill, 1960.

New edition. Note that edition is abbreviated (ed.).

Jefferds, C. V., Jr. *The psychology of industrial unrest.* (2nd ed.) New York: McGraw-Hill, 1964.

Clarke, P. V. *Psychological study of the Navajos.* (Rev. ed.) Berkeley: University of California Press, 1966.

8.32 *Edited book and specific chapter.* Note that "Editor" is abbreviated (Ed.).

Kelly, J. T. (Ed.) *Theories of psychopathology.* Springfield, Ill.: Charles C Thomas, 1965.

Wood, A. The reinforcement of anxiety. In J. T. Kelly (Ed.), *Theories of psychopathology.* Springfield, Ill.: Charles C Thomas, 1965.

8.33 *Work of several volumes.*

Lochren, H. R. *Collected works.* London: Oxford University Press, 1938-40. 4 vols.

8.34 *One volume of multivolume work.*

Coleberg, E., Matthews, S. T., & Cooper, S. I. *Approaches to educational psychology.* Vol. 1. *Basic principles.* Boston: Houghton Mifflin, 1963.

8.35 *Author as publisher.* If a personal author is also the publisher, use "Author" for the identification of the publisher.

Branam, F. P. *A new theory of taste. Chicago*: Author, 1960.

Program Development Corporation. *Program for supervisory training.* Smithfield, Ohio: Author, 1964.

8.36 *Author's name in title and collected writings.*

Neckerman, S. F. Collected papers of . . . New York: Roidan Press, 1965.

Harris, N. C. (Collected writings) In V. H. Cook (Ed.), *Educational psychology Contributions of N. C. Harris to the field.* New York: Ronald Press, 1950. Pp. 62-112.

8.4 *Form of Periodical Entries.*

The bold-faced arabic figures used in the illustrations refer to volume numbers.

84.1a *Journal titles.* Titles of journals in the reference list and in text in APA publications are spelled out in full.

8.41b *Journal article, pagination by volume.*

Archer, P. W. The tactile perception of roughness. *American Journal of Psychology,* 1950, **63**, 365-373.

8.41c *Journal article, pagination by issue.* Use issue number (in parentheses following the volume number) only when the journal has independent pagination for each issue.

Cardinal, M. H. Anxiety among displaced children. *Bulletin of the World Federation for Mental Health,* 1950, **2**(4), 27-35.

8.42a *Monograph with volume number, issue number, and serial (whole) number.*

Follette, J. Relation of intelligence to motor skill. *Psychological Monographs,* 1950, **62**(14, Whole No. 287).

8.42b *Monograph without volume number.*

Merewede, D. R. Measurement of teachers' attitudes. *Teachers College Contributions to Education,* 1960, No. 643.

8.42c *Monograph supplement.*

Graham, J. G. Effects of environment on reaction time. *Journal of Experimental Psychology,* 1968, **76**(4, Pt. 2).

8.42d *Annual Periodicals.*

Polis, R.F. Leadership style, hierarchical influence and theoretical implications. *Proceedings of the 74th Annual Convention of the American Psychological Association,* 1966, **1**, 39-40.

8.43 *Abstract.*

Newell, N. B. Vocabulary as a function of adult age. *American Psychologist,* 1951, **6**, 420. (Abstract)

8.44 *Secondary source.* While references should, whenever possible, be checked with the original, in a few cases pertinent material is available only from a secondary source. Inclusion of such references is permissible with the secondary source indicated.

Harkavy-Katz, S. Hayelod hahole b'shituk mohi v'hayeled hamongloidi b'hayey hemisphaha, *Harefuah,* 1952, **43**, 70-71. (*Psychological Abstracts,* 1953, **28**, No. 1182)

Smithers, E. F. Mating behavior. *Midland annals of natural history,* 1892, **6**, 4-8. Cited by A. N. Gora, *Amphibian biology.* London: Baker & Smith, 1949. P. 63.

8.45 *Book Reviews.*

Gandt, W. P. Review of J. T. Singer, *Selected works.* (2nd ed.) *Contemporary Psychology,* 1957, **2**, 272-273.

8.46 *Government reports.* The bibliography of reports from governmental agencies, especially the near-print reports of research projects, is exceedingly complex. No single rules for citation can be formulated. *Psychological Abstracts* has used bibliographic entries of the book or journal article form with the addition of identifying data such as Project Number, Contract Number, or the name of the contractor. The basic principle is to give sufficient information so that the interested reader may secure a copy from a library or the issuing agency. A practical suggestion to authors is to cite such reports as they have been cited in *Psychological Abstracts.*

8.47 *Report submitted to an agency.*

Jones, B. Quality of batteries. Technical Report No. 2, February 3, 1964, University of Ashgash, Contract Nonr 1259-NR 171-224, National Institute of Mental Health.

8.48 *Republication.* Cite the reference completely as it first appeared; then, in parentheses following the final period, place the word "Republished," a colon, and only that portion of the information which is novel.

Jones, E. A. *The ego.* Leipzig: Verlag Press, 1958. (Republished: New York; Harcourt, Brace & World, 1965.)

8.5 *Unpublished Materials*

8.51 *Dissertations.* Authors should make every effort to secure University Microfilm numbers for doctoral dissertations. If unavailable on microfilm, the second form may be used:

Williams, S. R. *The measurement of nystagmus in normals and schizophrenics.* (Doctoral dissertation, University of Vermont) Ann Arbor, Mich.: University Microfilms, 1959. No. 59-297.

Lightburn, L. T. The relation of critical fusion frequency to age. Unpublished doctoral dissertation, University of New Jersey, 1951.

8.52 *Papers presented at scientific meetings.*

Strebor, K. Sociopsychological study of motivation. Paper presented at the meeting of the New England Psychological Association, Boston, April 1966.

8.53 *Symposium.*

Farnum, D. F. (Chm.) Motivation. Symposium presented at the meeting of the American Psychological Association, Philadelphia, August 1963.

8.54 *Contribution to symposium.*

Seis, C. E. Behavior and awareness. In V. A. Berg (Chm.), Research and interpretation. Symposium presented at the meeting of the American Psychological Association, Chicago, September 1965.

8.55 *Material "in press."* An article or book accepted for publication but not yet in print may be designated as "in press." In the reference list it follows all other references by the same author. Provide all information possible at time of writing. Often the reference can be completed by the time the author receives proof. A paper that has merely been submitted but not accepted by a journal should be footnoted.

Sedlack, J. A. Rorshach indicators of anxiety. *Journal of Consulting Psychology,* 1967, **72**, in press.

Marks, G. *Academic and nonacademic accomplishment.* Boston: Little, Brown, 1965, in press.

8.56 *Other unpublished manuscripts.* These works should not be cited unless the manuscript is on file with the NAPS or available from a library. Give author, title, the words "Unpublished manuscript," the library where it is available, or NAPS document number, and the date.

Jones, K. M. Measurement of teachers' attitudes. Unpublished manuscript, Columbia University, 1964.

8.6 *References in Text*

Cite all references in text by enclosing in parentheses the author's surname and the year of publication. Example: A recent study (Jones, 1954) has shown . . . . If no author, use first two or three words of the title (enough to locate the reference in the reference list) and the year. Example: (Webster's Dictionary, 1965).

If the name of the author occurs in the text, the reference citation need be only the year of publication. Example: Jones (1958)) has said . . . .

If the reference has two authors, the citation includes the surnames of both connected with an ampersand. Example: A recent study (Jones & Smith, 1964) has shown . . . . If a reference has more than two authors, the citation includes the surnames of all authors the first time it appears; later citations of the same reference include only the surname of the senior author and the abbreviation "et al." Examples: A recent study (Jones,

Smith, Boren, & White, 1958) shows . . . . The study previously cited (Jones et al., 1958) shows . . . .

If the reference list includes publications by two or more authors with the same surname, citations in the text include their initials to avoid confusion.

References to different works cited at the same point in text are separated by semicolons and enclosed in one pair of parentheses. References to various works by the same author are separated by commas, and the author's name is not repeated for each work. The order is alphabetical by author's surname or, if all are by the same author, in sequence by year of publication. Examples: Recent studies (Jones, 1956, 1958, 1965) have shown . . . . Recent studies (Brown, 1958; Jones, 1953, 1954a, 1954b; Smith, 1956) have shown . . . . Jones (1953, 1954) has shown . . . .

To refer to a particular page, pages, or chapter, give the page or chapter numbers following the reference citation. Examples: (Jones, 1958, p. 10), (Jones, 1958, pp. 10-19), (Brown, 1958, p. 10); (Smith, 1964), (Jones, 1958, Ch. 2).

When parentheses are involved, set the reference: (as can be seen from Table 2 of Jones, 1953, as well as from the report of Smith, 1964), or: (as in other studies — Jones, 1953).

8.7 *Quotations in Text*

Quotations should be given exactly as they appeared in the source. The original wording, punctuation, spelling, and italics must be preserved even if they are erroneous. Authors shoud routinely check the typed copy of quotations with the original source before submitting their manuscripts. The citation of the source of a direct quotation should always include the page or pages as well as the reference. The citation is given in brackets following the last word of the quoted material. It precedes the final periods of the quotation and is within quotation marks when quotation marks are used. Example:

Grasse (1949) considers his test simply as a more sensitive index of "impairment in both the concrete and abstract spheres [p. 13]."

8.71 *Short quotations.* Quotations of a sentence or two are incorporated in text and set off by quotation marks.

8.72 *Longer quotations.* Quotations of more than five printed lines (three typewritten lines) are printed in small type. When making a longer excerpt, begin a new paragraph, do not indent, use no quotation marks, but draw a *light* pencil line to indicate material to be reduced in size.

8.73 *Additions to and deletions from quotations.* Any material inserted in a quotation by the author of an article is enclosed in brackets (see Section 4.1).

9. *Typing the Manuscript*

The typing of a manuscript is a most important step. The author should study this section carefully and go over it in detail with his typist. Many shortcomings of manuscripts result from failure to observe a few simple rules for typing. Papers often have to be returned to authors because of lack of double spacing or lack of sufficiently wide margins.

9.1 *General Requirements of Typing*

9.11 *Submit manuscripts in duplicate.* Manuscripts must be submitted in duplicate, to facilitate referral to consulting editors. One copy must be an *original* typewritten copy, typed on one side of the paper only. The duplicate should be the first clear carbon copy. Use mimeographed, dittoed, or Xerox copies only if they are *very* good clear copies.

9.12 *Double spacing throughout.* Double space between *all* lines of the manuscript without exception. This is essential in order to maximize legibility and to provide space for editorial corrections. Double spacing means making a double space between every line in the title, headings, footnotes, quotations, references, figure captions, and in the tables. A good rule for the typist is: Set the typewriter for double spacing and leave it there!

9.13 *Use heavy paper of standard size.* Manuscripts should be typed on heavy bond paper of good quality. Tissue, onionskin, and thin "airmail" paper should not be used because they will not stand the stress of handling and because their transparency reduces legibility.

Only paper 8½ x 11 inches (standard) or 8 x 10½ inches (government) should be used. All sheets of one manuscript must be of the same size.

Use no half sheets or strips of paper glued, pinned, or stapled to the sheet. They are often torn off or lost in shipment and handling.

9.14 *Leave wide margins.* Leave a margin of 1 inch or more at the top, bottom, right, and left of every page. The editor has to write many instructions to the printer in the margins.

Six inches is the best length for each typed line. Set a pica typewriter to a 60-character line and an elite machine to 72 characters. Uniformity helps the editor to make a more exact estimate of the length of the article.

9.15 *Indent all paragraphs.* Indent the first line of every paragraph, in-

cluding each footnote, figure caption, and table footnote. Do not use a block form for typing.

Type *all* of a manuscript to the same uniform left-hand margin, except for the paragraph indentations. Do not indent whole paragraphs to give them emphasis. Do not use, in the text of an article, an outline form that has graduated indentations. In the journals all material is set with a uniform left margin; any other practice is wasteful of space. It is expensive and monotonous editorial labor to indicate to the printer that extraindented lines are to be brought to the margin.

9.16 *Typing capitals.* Another good typing rule is *never* to type any whole word in all capital letters with the exception of the title (see following paragraph). Do not type the authors' names, centered headings, or table headings in all capitals. Instead, use capital and small letters, capitalizing only the initial letters of important words. It is easier for an editor to add instructions to set matter in capitals than for him to indicate the removal of undesired capitals.

The title should be typed in all capitals, centered, at the top of the first page of the manuscript, with a margin of 1½ inches above it. If the title is more than one line long, double space between its lines.

The name of the author(s) should be typewritten, centered, one double-spaced line below the title. Names should be typed in large and small letters, not in all capitals.

If two or more authors of an article are located at the same institution, their names are typed on one line if space permits. Their institutional connection appears on the next double-spaced line. Commas separate the names of three or more authors.

If authors are from different institutions, the names should be on separate lines, the number of such lines being governed by the number of institutions. Double space between all lines (see Section 3.2). The word "and" should precede the last author's name, on the same line. An example follows:

Rodger F. Griessel, Donald C. Perkins
University of Illinois
and Nancy J. Sittig
Southern Illinois University

In the case of two authors with different affiliations, the following setting is used where feasible (i.e., governed by the length of the affiliation):

John Jones	and	William Brown
University of Maryland		*American University*

In the case of three authors the following setting is usual:

John Jones
University of Maryland

William Brown
American University

and James Black
George Washington University

9.17 *Underline sparingly.* Underline only when you mean to set a word in italics, and use italics very infrequently.

9.18 *Use separate sheets for tables, figure captions, footnotes, and references.* Type each table on a separate sheet of paper. Figure captions should appear on one sheet, in order. Begin the references at the top of a new page.

9.19 *Minimize corrections.* A moderate number of neat typewritten or pencil-lettered corrections is acceptable in manuscripts. Manuscripts are corrected between the lines, not in the margins. Never add a sentence written vertically on the manuscript's margins. Strikeovers on the typewriter are not acceptable corrections, as they are often illegible. Erase neatly or make clear corrections by pencil. If there are many corrections, the manuscript should be retyped.

9.2 *Arrangement of Pages*

Arrange the pages of the manuscript of a journal article as follows:

a. Abstract.

b. First page, with title, author's name, etc. The text follows immediately on the same page.

c. Pages of text.

d. References (start on a new page).

e. Footnotes (start on a new page).

f. Tables (each on a separate sheet).

g. Figure captions (start on a new page).

h. Figures (each on a separate page).

9.3 *Numbering of Pages*

Place the page numbers of a manuscript in a consistent position, preferably in the upper right-hand corner. All manuscript pages, when arranged in the order given in Section 9.2, must be consecutively numbered with arabic numerals. Note that pages of references, footnotes, tables, and figure captions are numbered, not only the text pages.

In short manuscripts such as those prepared for journal articles there should be no need to insert pages numbered "6a" and the like. If an addi-

tional page is inserted after the pages have once been numbered, renumber all the pages.

Since pages might become separated at the printers, it is also wise to identify each manuscript page by typing the senior author's last name in its upper left-hand corner.

9.4 *Wrapping and Shipping*

The protection of the manuscript from the rough handling it may receive in transit is often neglected by authors. The mailing envelope should be strong and provided with a stiff cardboard or corrugated filler. The filler is essential if drawings, photographs, or materials intended for NAPS are enclosed. A heavy manuscript needs the additional protection of a string tied securely lengthwise and crosswise around the envelope.

Do not enclose the manuscript in a loose-leaf binder, or staple or fasten the pages together in any way. Binders add to shipping weight, and editors and printers prefer to work with loose sheets.

The author should always retain a second carbon copy of a paper as a precaution against the loss of the original.

Mail the manuscript by first-class mail only to the editor, not to the APA Central Office, except in the case of manuscripts for *American Psychologist* or for *Psychological Abstracts,* whose offices are located there. Since editors and their addresses change from time to time, it is important to check the current issue of the journal for which the manuscript is being prepared in order to ascertain the name of the editor and his mailing address.

10. *Correction of Proofs*

10.1 *Proofreading*

An author's last responsibility is to read the proofs accurately. A month or so before the issue is to appear, each author receives two sets of proofs and the manuscript from the printer. Experienced proofreaders advise the following method:

First, give the proof a literal reading. A copyholder reads the manuscript aloud slowly, reading all punctuation marks and spelling out all proper names and technical words. Simultaneously, the author reads the proof, letter by letter and not for sense, to catch all deviations from the manuscript. Every caption and heading should be read, and every numeral in each table. Use the customary proofreaders' marks. Correction, *in black pencil* (never use ink or colored pencils), requires two marks on the galley — one

in the margin indicating what is to be done, and another within the text indicating by a caret (∧) the exact place where the change is to be made. If several corrections occur in one line, mark them from left to right in the nearest margin, and separate them by a long slant line (/). Do not try to squeeze corrections between the printed lines. If there is no one to serve as copyholder, proof can be read alone by glancing from the proof to the copy; this method is not as efficient.

Second, read the proofs again carefully for sense. This reading will reveal broader errors such as omission of a key sentence which can be missed.

Third, check specific points: (*a*) Are the title, authors' names, and institutional connections correct? (*b*) Are the tables all printed, and are they reasonably well placed? (*c*) Are the figures correct? Is the correct caption under each figure? Switched captions under similar figures are not rare. (*d*) Are the centered and paragraph headings correct and correctly placed? (*e*) Have all queries been answered? (*f*) Have all references been cited?

The author bears the primary responsibility for proofreading, and must not take the task lightly. Promptness is essential. If the proof is not read and returned within 48 hours, the printer's schedule and the technical editor's schedule are disrupted. A week's delay in returning your proof may mean a longer delay in the appearance of the whole issue. Return the original copy of the corrected proof and *the manuscript* to the Managing Editor of APA publications in Washington, according to instructions received with the proof. Keep the other copy of the proof.

10.2 *Author's Alterations*

Proofreading makes the printed page identical with the manuscript copy, and nothing more. To make a change on the proof other than to make it correspond exactly to the manuscript is an *author's alteration,* which must be avoided except in extreme instances. To strike out or change a single word near the beginning of a paragraph often requires resetting the entire paragraph. The cost is charged to the author. Extensive author's alterations may cause delays in publication, and may lead to the introduction of errors when the author's intentions are not entirely clear to the printer. Further, any extensive additions, deletions, or changes by the author on galley proof must be approved by the editor.

When a change on the proofs is essential — to correct a serious and hitherto undiscovered error of fact or interpretation — it is important to

PROOFREADERS' MARKS

	Delete
	Delete and close up
	Reverse
	Close-up
	Insert space
	Close up and insert space
	Less space
	Paragraph
	Indent 1 em
	Move to left
	Move to right
	Lower
	Raise
	Insert marginal addition
	Space evenly
	Broken letter — used in margin
	Push down space
	Straighten line
	Align type
	Insert comma
	Insert apostrophe
	Insert quotation mark
	Insert hyphen
	Brackets
	Parentheses
	Superior figure
	Inferior figure
	Insert em dash
	Insert en dash
	Insert semicolon or
	Insert colon
	Insert period
	Insert interrogation point
	Query to author — in margin
	Use ligature
	Spell out in margin
	Transpose
	Wrong font
	Set in **boldface** type
	Set in roman type
	Set in *italic* type
	Set in CAPITALS
	Set in SMALL CAPITALS
	Set in lower case
	Lower-case letter
	Lower-case letter
	Let it stand
	Let it stand; restore words crossed out
	Run in same paragraph
	Insert lead between lines
	Hair space between letters

"Fourscore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate—we cannot consecrate—we cannot hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us,—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth."

plan the alteration to minimize cost and confusion. To change words at the end of a paragraph, or to add several more lines to the end of a paragraph, costs comparatively little. If a change near the beginning of a paragraph is necessary, the author should count the number of characters and spaces to be removed and make an insertion or change that will use as nearly as possible the same number of characters and spaces. Corrections may not be made in the proofs of figures, as changes should not be made in the electrotypes. If a change is absolutely necessary, the figure must be completely redrawn and the new copy submitted. The best practice is to have the manuscript so free from errors that alterations on the proof are unnecessary. Never alter the manuscript when correcting galleys.

Conclusion

The value of APA's journals for the advancement of psychology as a science and as a profession depends on the quality of the articles prepared by the authors and selected by the editors. The *Publication Manual* is a tool for improving techniques of communication.

The editors offer the *Manual* with the hope that each author will consult it before submitting a manuscript for publication, and that departments giving graduate instruction in psychology will require their students to use it as a guide for the preparation of papers.

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